

Application No. 10/686,481  
Attorney Docket No.: 032017  
Amendment Under 37 C.F.R. § 1.116

### **REMARKS**

Claims 1 and 3-21 are pending in the present application. Claims 1, 3, 6, 7, 18, 19 and 21 have been amended. Claim 2 has been cancelled.

#### **Claim Rejections - 35 U.S.C. § 112**

Claim 2 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has been amended to recite the limitations of claim 2. The claim 2 limitations added to claim 1 have also been changed for clarification for overcoming the § 112 rejection.

Withdrawal of the rejection under § 112 is requested.

#### **Claim Rejections - 35 U.S.C. §§ 102 and 103**

Claims 1-3, 6-9 and 17-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Taguchi (U.S. Patent 5,332,365, hereinafter referred to as “**Taguchi ‘365**”); claims 14-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Taguchi ‘365**; claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Taguchi ‘365** in view of **Burkett** (U.S. 6,688,853); and claims 1 and 10-13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Taguchi (U.S. Patent 5,165,863, hereinafter referred to as “**Taguchi ‘863**”).

Favorable reconsideration is requested.

As stated above, claim 1 has been amended to include the limitations of claim 2. Claims 3, 6, 7, 18, 19 and 21 have been amended to change their dependency from claim 2 to claim 1.

Applicants respectfully submit that neither Taguchi '365 nor Taguchi '863 teaches or suggests:

a plunger of a solenoid, said plunger is divided into a first plunger and a second plunger, and a pressure-sensing member is disposed between the first plunger and the second plunger, for sensing suction pressure in a suction chamber,

and

wherein, when the solenoid is energized, the first and second plungers attract each other with magnetic force via the pressure-sensing member to become an integral member which is attracted by a core

as recited in amended claim 1.

Regarding Taguchi '365, the Office Action takes the position that elements 460 and 481 correspond with first and second plungers as recited in the claims. (Office Action, page 3.)

As shown in Fig. 3 of Taguchi '365, the solenoid of the capacity control mechanism 400 comprises electromagnetic coil 430, first annular plate 411, axial annular projection 412, cylindrical member 451, and first annular cylindrical casing 410.

Cylindrical member 451 is of magnetic material, (col. 7, lines 63-64), and functions as the plunger of the solenoid. In addition, first annular cylindrical casing 410 is of magnetic material, (col. 7, lines 8-9), and functions as the yoke of the solenoid. Although not stated explicitly, first annular plate 411 and axial annular projection 412 are of magnetic material, and they serve as the core of the solenoid.

The line of magnetic force that is generated by electromagnetic coil 430 passes through a closed magnetic circuit comprising yoke 410 and a closed magnetic circuit comprising the core

(411, 412) and plunger 451. At this time, attractive force is generated between the core (411, 412) and plunger 451. Therefore, as taught in col. 8, lines 14-16, "when electromagnetic coil 430 is energized, an electromagnetic force tends to move the cylindrical member 451 upwardly." In other words, the plunger can be defined as a movable member of magnetic material that is moved closer to the core by the line of magnetic force.

Rod 481, cited by the Office Action as a first plunger, is provided completely outside a magnetic circuit and is not affected by the line of magnetic force generated by electromagnetic coil 430. Thus, rod 481 cannot be considered a plunger.

Rod 460, cited by the Office Action as a second plunger, is provided inside the magnetic circuit. Although not explicitly disclosed, rod 460 cannot be of magnetic material. If rod 460 were of magnetic material then axial annular projection 412, which functions as an electric magnet, would attract rod 460 to stop its axial movement when electromagnetic coil 430 is energized. Thus, if rod 460, which is fixed to and moves integrally with plunger 451 so as to transmit the axial displacement of plunger 451 to diaphragm 483, were of magnetic material, then plunger 451 could not function properly. Therefore, rod 460 is not affected by the line of magnetic force generated by electromagnetic coil 430 and cannot be a plunger.

Regarding Taguchi '863, the Office Action takes the position that valve member 480 and rod 460 correspond to first and second plungers as recited in the claims. (Office Action, page 9.)

Valve member 480 is provided completely outside a magnetic circuit and is not affected by the line of magnetic force generated by electromagnetic coil 430. Thus, valve member 480 cannot be considered a plunger.

Rod 460 is provided inside the magnetic circuit. Although not explicitly disclosed, rod 460 cannot be of magnetic material. If rod 460 were of magnetic material then axial annular projection 412, which functions as an electric magnet, would attract rod 460 to stop its axial movement when electromagnetic coil 430 is energized. Thus, if rod 460, which is fixed to and moves integrally with plunger 451 so as to transmit the axial displacement of plunger 451 to diaphragm 418, were of magnetic material, then plunger 451 could not function properly. Therefore, rod 460 is not affected by the line of magnetic force generated by electromagnetic coil 430 and cannot be a plunger.

Regarding claim 10, the Office Action appears to state that “the spring disposed between elements 482 and 485” corresponds to the shock-absorbing means as recited in claim 10. (Office Action, page 16.) The Office Action states that the spring disposed between elements 482 and 485 acts to absorb any displacement generated by pressure on a side of either element 482 or 485.

The shock-absorbing means as recited in claim 10 is necessary for the pressure-sensing member and the first plunger attracting and colliding with each other when the solenoid is energized.

By contrast, in the control valve of Taguchi ‘863, third coil spring 491 and first coil spring 470 keep a contact state between circular plate 482, diaphragm 418, and rod 460. Circular plate 482, diaphragm 418, and rod 460 do not separate from each other nor collide with each other. Therefore, a shock-absorbing means for absorbing impact in collision is not necessary for the control valve of Taguchi ‘863 and Taguchi ‘863 does not include such a shock-absorbing means.

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For at least the foregoing reasons, claims 1 and 10 are patentable over Taguchi '365 and Taguchi '863, and claims 3-20 are patentable by virtue of their dependence from claim 1. Accordingly, withdrawal of the rejections of claims 1 and 3-20 is hereby solicited.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



Andrew G. Melick  
Attorney for Applicants  
Registration No. 56,868  
Telephone: (202) 822-1100  
Facsimile: (202) 822-1111

AGM/adp